

What is claimed is:

1. A method for producing at least one glass substrate having a predetermined shape, the method comprising:

providing a processing fixture including at least one curved support member having a predetermined curvature, the at least one curved support member being configured to support the at least one glass substrate;

placing the at least one glass substrate on the at least one curved support member; and

heating the at least one glass substrate to a predetermined temperature for a predetermined period of time, the predetermined temperature being below the glass softening point and sufficiently high enough to cause glass shape change, whereby the at least one glass substrate conforms to the predetermined curvature during the predetermined period of time.

2. The method of claim 1, wherein the processing fixture includes a plurality of curved support members.

3. The method of claim 1, wherein the processing fixture includes a plurality of curved support members for accommodating a plurality of glass substrates.

4. The method of claim 1, wherein the predetermined temperature is within a range of temperatures between 400-700°C.

5. The method of claim 1, wherein the predetermined period of time is within a range of up to several hours.

6. The method of claim 5, wherein the predetermined period of time is approximately one hour.

7. The method of claim 1, further comprising the step of cooling the at least one glass substrate, whereby the at least one glass substrate retains the predetermined curvature.

8. The method of claim 1, wherein the step of providing includes fabricating the at least one curved support member from a relatively inert material that does not interact with or contaminate the at least one glass substrate at the predetermined temperature.

9. An apparatus for producing at least one glass substrate having a predetermined shape, the apparatus comprising:

a processing fixture including at least one curved support member having a predetermined curvature, the at least one curved support member being configured to support the at least one glass substrate; and

a furnace configured to heat the at least one glass substrate to a predetermined temperature for a predetermined period of time, the predetermined temperature being below the glass softening point and sufficiently high enough to cause glass compaction, whereby the at least one glass substrate conforms to the predetermined curvature during the predetermined period.

10. The apparatus of claim 9, wherein the at least one curved support member is fabricated from a relatively inert material that does not interact with or contaminate the at least one glass substrate when disposed in an environment having an ambient temperature that is less than or equal to 700°C.
11. The apparatus of claim 10, wherein the material includes steel.
12. The apparatus of claim 10, wherein the material is a ceramic material.
13. The apparatus of claim 10, wherein the at least one curved support member includes a plurality of curved support members, each of the plurality of curved support members accommodating one glass substrate.
14. The apparatus of claim 13, wherein the processing fixture further comprises a plurality of alignment elements disposed between adjacent curved support members.
15. The apparatus of claim 14, wherein the plurality of alignment elements are adjustable such that the plurality of curved support members is movable between an open position and a closed position.